IN THE CLAIMS:

1 - 15 (Canceled)

16. (Currently Amended) An optical parametric oscillator comprising:

a crystal adapted to shift energy received at a first wavelength and output said shifted energy at a second wavelength, said second wavelength being a secondary emission of energy induced by a primary emission generated from said first wavelength by said crystal and

a mechanism disposed in functional alignment with said crystal for containing said primary emission and enhancing said secondary emission thereby, said mechanism including first and second mirrors, both of said mirrors being highly reflective at the wavelength of said primary emission, and at least one of said mirrors being at least partially transmissive to energy at said second wavelength.

17 – 18 (Canceled)

19. (New) The invention of Claim 16 wherein said crystal is X cut.

20. (New) The invention of Claim 16 wherein said crystal is Y cut.

21. (New) The invention of Claim 16 wherein said crystal is potassium titanyl arsenate.

22. (New) The invention of Claim 16 wherein said first wavelength is approximately 1.06 microns, said second wavelength is approximately 2.59 microns and said primary emission includes energy at 1.53 microns.

23. (New) The invention of Claim 16 wherein said first wavelength is approximately 1.06 microns, said second wavelength is approximately 3.76 microns and said primary emission includes energy at 1.53 microns.

24. (New) The invention of Claim 16 wherein said crystal is angle tunable.